

Inspection Report with SI&A Data

Structure Description: 1208 Foot - 21 Span Steel continuous Stringer/Multi-beam or Girder

2 District: 05 **3 County:** Jefferson **16 Latitude:** 38°14'46.00" **7 Longitude:** 85°45'08.00"

7 Facility Carried: I-65

Milepoint: 0.050

6A Feature Intersected: JACOB, BROADWAY, GRAY ST

9 Location: .7 MI S US 31E

NBI	X
Element	X
Fracture Critical	
Underwater	
Special	

Structure Description: 1208 Foot - 21 Span Steel continuous Stringer/Multi-beam or Girder

NBI CONDITION RATINGS			
58 Deck:	6	61 Channel:	N
59 Superstructure:	5	62 Culvert:	N
60 Substructure:	5	Sufficiency Rating:	79.9

GEOMETRIC DATA		
48 Max Length Span:		123.583 ft
49 Structure Length:		1,207.999 ft
32 Approach Roadway:		-3.281 ft
33 Median:		(3) Closed w/Barrier
34 Skew:		0°
35 Flare:		Yes
50A Curb/Sidewalk Width L:		0.000 ft
50B Curb/Sidewalk Width R:		0.000 ft
47 Horiz. Clearance:		44.619 ft
51 Width Curb to Curb:		-3.281 ft
52 Width Out to Out:		105.299 ft
48 Max Length Span:		123.583 ft

DESIGN	
Substandard:	No
Fracture Critical:	No FC Details
43A Main Span Material:	(4) Steel Continuous
43B Main Span Design:	(02) Stringer / Girder
45 Number of Spans Main:	21
44A Approach Span Material:	Not Applicable
44B Approach Span Design:	0 - NA
46 Number of Approach Spans:	0
107 Deck Type:	(1) Concrete-Cast-in-Place
108A Wearing Surface:	(6) Bituminous
108B Membrane:	(0) None
108C Deck Protection:	(1) Epoxy Coated Reinforcing
Overlay Y/N:	Yes
Overlay Type:	LT Poly
Overlay Thickness:	2.250 in
Overlay Date:	2012

ADMINISTRATIVE		
27 Year Built:		1960
106 Year Reconstructed:		1980
42A Type of Service On:		(1) Highway
42B Type of Service Under:		(1) Highway
37 Historical Significance:		(5) Not Eligible
21 Maintenance Responsibility:		(01) State Hwy Agency
22 Owner:		(01) State Hwy Agency
101 Parallel Structure:		(N) No II Structure Exists
52 Width Out to Out:		105.299 ft

APPRAISAL	
36A Bridge Railings:	(1) Meets Standards
36B Transitions	(1) Meets Standards
36C Approach Guardrail:	(1) Meets Standards
36D Approach Guardrail Ends:	(1) Meets Standards
71 Waterway Adequacy:	(N) Not Applicable
72 Approach Alignment:	(8) Equal Desirable Crit
113 Scour Critical:	(N) Not over Waterway
Recommended Scour Critical:	(N) Not over Waterway

CLEARANCES		
10 Vert. Clearance:		14.669 ft
53 Min. Vert. Clearance Over:		99.999 ft
54A Vert. Under Reference:		(H) Hwy beneath struct.
54B Min. Vert. Underclearance:		14.669 ft
55A Lateral Under Reference:		(H) Hwy beneath struct.
55B Min. Lat. Underclearance R:		8.000 ft
56 Min. Lat. Underclearance L:		8.000 ft
10 Vert. Clearance:		15.000 ft

LOAD RATINGS	
63 Operating Type:	(1) Load Factor (LF)
64 Operating Rating:	60.0 tons
65 Inventory Type:	(1) Load Factor (LF)
66 Inventory Rating:	36.0 tons
Truck Capacity Type I:	0 tons
Truck Capacity Type II:	0 tons
Truck Capacity Type III:	0 tons
Truck Capacity Type IV:	0 tons

POSTINGS		
41 Posting Status:		(A) Open, No Restriction
Signs Posted Cardinal:		No
Signs Posted Non-Cardinal:		No
Field Postings Gross:		tons
Field Postings Type I:		tons
Field Postings Type II:		tons
Field Postings Type III:		tons
Field Postings Type IV:		tons
54B Min. Vert. Underclearance:		14.669 ft

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55A Lateral Under Reference: (H) Hwy beneath struct.
55B Min. Lat. Underclearance R: 8.000 ft
56 Min. Lat. Underclearance L: 8.000 ft

12: Re Concrete Deck

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	167,854	146,229	87%	21,625	13%	0	0%	0	0%

Efflorescence, scattered staining, delamination with exposed rebar under the deck between beams and over the pier 121W, Pier 118E, Pier 118W, and Abutments.

510: Wearing Surfaces

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
SQ.FT	159,413	159,413	100%	0	0%	0	0%	0	0%

No spalls or potholes except where the asphalt joint is present. Debris over top of deck.

107: Steel Opn Girder/Beam

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	5,723	5,437	95%	286	5%	0	0%	0	0%

Some surface rust is forming on beams.

515: Steel Protective Coating

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	13,159.74	13,028.07	99%	131.67	1%	0	0%	0	0%

The protective coatings of the steel beams exhibit substantially effective protection.

Inspection Report with SI&A Data

109: Pre Opn Conc Girder/Beam

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	11,600	11,598	100%	0	0%	2	0%	0	0%

There is a shear crack in web of PCIB at P118W.

110: Re Conc Opn Girder/Beam

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	4,626	4,510	97%	95	2%	21	0%	0	0%

There are several locations of cracking, spalling, staining, and exposed reinforcement over the piers. These locations include: Beam #4 at P106W, Beam #8 at P112W, Beam #16 at P118W, Beam #16 between piers P119 and P120.

205: Re Conc Column

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	152	120	79%	32	21%	0	0%	0	0%

Cracking, spalling, exposed rebar and staining on most piers at joint location.

215: Re Conc Abutment

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	188	155	82%	33	18%	0	0%	0	0%

There are several locations of cracking, spalling, delamination and exposed rebar of the back wall and cap of End Bent C. Abutment A5 exhibits cracking and spalling of the back wall and the portion (2") of shear key is gone.

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234: Re Conc Pier Cap

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	2,446	2,198	90%	150	6%	98	4%	0	0%

There are several locations of cracking (CS2), spalling (CS2), staining and exposed reinforcement (CS3) at piers and abutments.

302: Compressn Joint Seal

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	855	0	0%	0	0%	855	100%	0	0%

Loose plate and asphalt plug over joint and water proofing mix which was constructed on 2012 is deteriorated and breaking loose, causing the joint to leak. Broken assembly has created a loud noise from traffic impact. The element has impact damage. Existing joints were covered over with asphalt plug joints as part of 2012 repair contract and can no longer be visually inspected. See Element 306 for noted deficiencies.

306: Other Joint

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	855	767	90%	28	3%	40	5%	20	2%

Minor to moderate cracking in all the asphaltic joints varying from 1/8 to 2 1/2 inch. Sliding plate is exposed at joint 115E.

310: Elastomeric Bearing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	346	346	100%	0	0%	0	0%	0	0%

No deficiencies noted.

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311: Moveable Bearing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	153	0	0%	153	100%	0	0%	0	0%

Bearings have surface rust starting to form throughout. Bearing devices under RCDG sections are rusted, particularly at Pier 112.

515: Steel Protective Coating

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	111.11	0	0%	111.11	100%	0	0%	0	0%

The protective coatings of the moveable bearings exhibit limited effectiveness on all the rocker bearings.

313: Fixed Bearing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	51	0	0%	51	100%	0	0%	0	0%

Rust is starting to form on fixed bearings, particularly at the RCDG bearings.

515: Steel Protective Coating

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
EACH	37.53	0	0%	37.53	100%	0	0%	0	0%

The protective coatings of the fixed bearings exhibit substantially effective protection.

331: Re Conc Bridge Railing

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
FT	5,353	5,164	96%	189	4%	0	0%	0	0%

Barriers have minor cracks and scrapes.

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852: Drains

Units	Total Qty	Qty. St. 1	% in 1	Qty. St. 2	% in 2	Qty. St. 3	% in 3	Qty. St. 4	% in 4
(EA)	1	0	0%	0	0%	1	100%	0	0%

Most drains are clogged and need cleaning. Drain pipe is missing at pier 120E.

STRUCTURE NOTES

-Beginning with the 2010 inspection, inspections should be completed utilizing the bridge component numbering system used in the original and rehab bridge plans. A layout plan sheet specifically marked for bridge component numbering has been placed in the district bridge file and the scanned electronic bridge file for quick reference.

-In 2006, ends of some PCI beams were repaired with CFRP fabric by a contract through the Kentucky Transportation Center. (Project No. I-65-PCG05)

-2012 repair contract (Contract ID 121305 Proposal and Plans) included the following: 1. The deck was overlaid with 2.25" of an asphalt waterproofing mix (low temp., a product by "Road Science" - not Rosphalt), 2. Asphalt plug joints were installed over most existing joints.

-State forces performed an in-depth inspection of the steel spans in 2001, and a consultant performed one in 2007. See previous reports for details.

-The coding guide does NOT allow for accurate coding of Items 43 and 44 for this bridge - it has steel, PCI and RCDG continuous spans. Since no one type is dominant, Item 43 was coded as steel continuous (higher priority for in-depth inspections) and all spans were counted as "main" spans (no approach spans were coded).

INSPECTION NOTES

The Standard Inspection was performed by Stantec Consulting Services, Inc. on December 17, 2014. The inspectors included Matthew Mullins and Majid Rezaee. No specialized access techniques or equipment was utilized for this inspection. The top side of deck was inspected from the outside shoulders of the north bound and south bound lanes (no traffic control was used).

WORK

Action: 1038 - Drainage-Clean/Clear Deck Drains/Downspouts

Generated by tgking on 12/13/2010 - Drains need to be cleaned and drain pipes unclogged/replaced. NTW 12/13/12

Generated by user "MREZAE" on 12/17/2014 Clean clogged drains.

Action: 1046 - Joints-Repair

Generated by tgking on 12/13/2010 - Joints in various states of disrepair need to be resealed or replaced.

Generated by user "MREZAE" on 12/17/2014 Joints need to be repaired or needs new patching.